

<b>FORM 1</b> <b>GENERAL</b>		<b>U.S. ENVIRONMENTAL PROTECTION AGENCY</b> <b>GENERAL INFORMATION</b> <b>Consolidated Permits Program</b> <i>(Read the "General Instructions" before starting.)</i>				<b>I. EPA I.D. NUMBER</b> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:5%;">S</td> <td style="width:75%;">VI0039829</td> <td style="width:10%;">T/A</td> <td style="width:10%;">C</td> </tr> <tr> <td>F</td> <td></td> <td></td> <td>D</td> </tr> <tr> <td>1</td> <td>2</td> <td>13</td> <td>14</td> </tr> <tr> <td></td> <td></td> <td></td> <td>15</td> </tr> </table>				S	VI0039829	T/A	C	F			D	1	2	13	14				15
S	VI0039829	T/A	C																						
F			D																						
1	2	13	14																						
			15																						
<b>LABEL ITEMS</b> <b>I. EPA I.D. NUMBER</b> <b>II. FACILITY NAME</b> <b>III. FACILITY MAILING ADDRESS</b> <b>IV. FACILITY LOCATION</b>		PLEASE PLACE LABEL IN THIS SPACE				<b>GENERAL INSTRUCTIONS</b> If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorization under which this data is collected.																			
<b>II. POLLUTANT CHARACTERISTICS</b>																									
<b>INSTRUCTIONS:</b> Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of <b>bold-faced terms</b> .																									
<b>SPECIFIC QUESTIONS</b>		<b>MARK "X"</b>		<b>SPECIFIC QUESTIONS</b>		<b>MARK "X"</b>																			
		YES	NO	FORM ATTACHED			YES	NO	FORM ATTACHED																
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
		16	17	18			19	20	21																
C. Is this facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	D. Is this proposal facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
		22	23	24			25	26	27																
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
		28	29	30			31	32	33																
G. Do you or will you inject at this facility any produced water other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
		34	35	36			37	38	39																
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																
		40	41	42			43	44	45																
<b>III. NAME OF FACILITY</b>																									
C 1 SKIP BCM/CHI Frenchman's Reef, Inc.																									
15 16-29 30		69																							
<b>IV. FACILITY CONTACT</b>																									
A. NAME & TITLE (last, first, & title)				B. PHONE (area code & no.)																					
C 2 Espinosa, Jose Gonzalez - General Manager		340		776		8500																			
15 16		45 46 48		49 51		52 55																			
<b>V. FACILITY MAILING ADDRESS</b>																									
A. STREET OR P.O. BOX																									
C 3 Estate Bakkeroe No. 5																									
15 16		45																							
B. CITY OR TOWN				C. STATE		D. ZIP CODE																			
C 4 St. Thomas		VI		00801																					
15 16		40 41 42		47 51																					
<b>VI. FACILITY LOCATION</b>																									
A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER																									
C 5 Estate Bakkeroe No. 5																									
15 16		45																							
B. COUNTY NAME																									
46		70																							
C. CITY OR TOWN				D. STATE		E. ZIP CODE		F. COUNTY CODE																	
C 6 St Thomas		VI		00801																					
15 16		40 41 42		47 51		52 54																			

CONTINUED FROM THE FRONT

**VII. SIC CODES (4-digit, in order of priority)**

A. FIRST										B. SECOND										
C	4952		(specify)							7	70		(specify)							
7			Sewage Treatment System							7			Hotel and Other Lodging Places							
15	16	17								15	16	19								
C. THIRD										D. FOURTH										
C	4971		(specify)							7	4941		(specify)							
7			Irrigation system							7			water production							
15	16	17								15	16	19								

**VIII. OPERATOR INFORMATION**

A. NAME															B. Is the name listed in Item VIII-A also the owner?									
C	BCM/CHI Frenchman's Reef, Inc.														<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO									
8																								
18	19													55										
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other," specify.)															D. PHONE (area code & no.)									
F = FEDERAL					M = PUBLIC (other than federal or state)					P (specify)					C		340		776		8500			
S = STATE					O = OTHER (specify)										A									
P = PRIVATE										56					15		16 18		19 21		22 25			

**E. STREET OR PO BOX**

Estate Bakkeroe, No. 5

F. CITY OR TOWN										G. STATE		H. ZIP CODE		IX. INDIAN LAND	
C	St. Thomas									VI		00801		Is the facility located on Indian lands?	
B														<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
15	16								40	42	42	47	51		

**X. EXISTING ENVIRONMENTAL PERMITS**

A. NPDES (Discharges to Surface Water)										D. PSD (Air Emissions from Proposed Sources)									
C	T	I	VI0039829							C	T	8	STT 1012-0.4, A,B & C						
9	N									9	P								
15	16	17	18					30	15	16	17	18					30		
B. UIC (Underground Injection of Fluids)										E. OTHER (specify)									
C	T	I	N/A							C	T	8	CZT -12-90						
9	U									9									
15	16	17	18					30	15	16	17	18					30		
C. RCRA (Hazardous Wastes)										E. OTHER (specify)									
C	T	I	N/A							C	T	8							
9	R									9									
15	16	17	18					30	15	16	17	18					30		

**XI. MAP**

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

**XII. NATURE OF BUSINESS (provide a brief description)**

Resort Hotel - Frenchman's Reef Hotel/Morningstar has 504 guest rooms with a maximum occupancy of 1008 persons. Frenchman's Cove Resort has 221 units with a maximum occupancy of 673.

2 Generators located in TE plant ground level

2 Boilers located in Plant Ground level

6 Restaurants (Windows, Captain's Café, Sunset Grill, Coco Joe's, Havana Blue, Frenchman's Cove Sunset Grill)

10 Grease Traps ( 3 in level 3 main kitchen, 1 in Sunset kitchen level, 3 in Coco Joe's, 2 in Havana Blue, 1 at Frenchman's Cove Sunset Grill)

2 laundry facilities (1 in Ocean Tower building ground level and 1 in Morning Star)

An emergency Reverse Osmosis water plant will be operated to supplement the public water supply. The plant is sized to produce 60,000 gpd of potable water. The plant will take water from the seawater chiller discharge line (150,000 gpd) and discharge into the existing outfall pit (90,000 gpd).

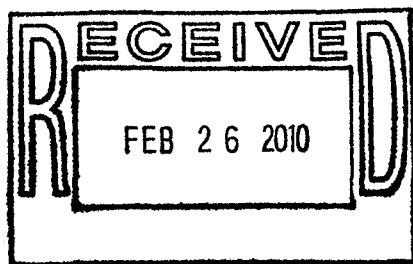
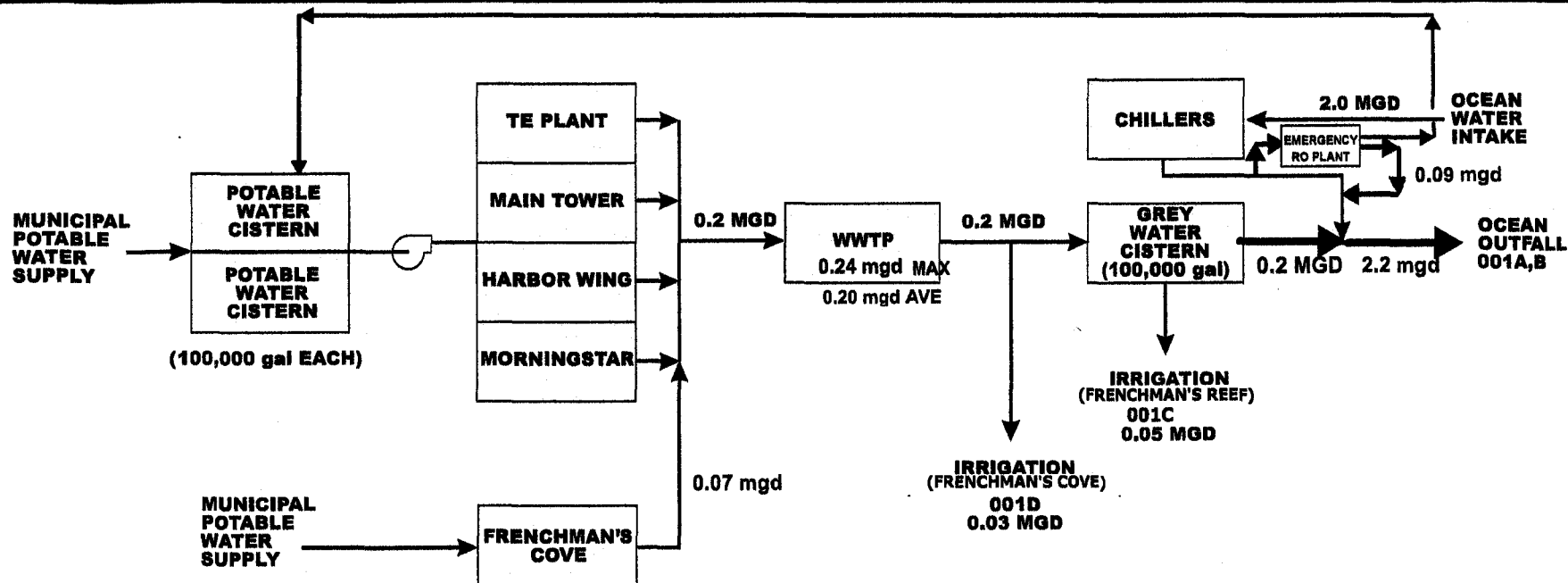
**XIII. CERTIFICATION (see instructions)**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

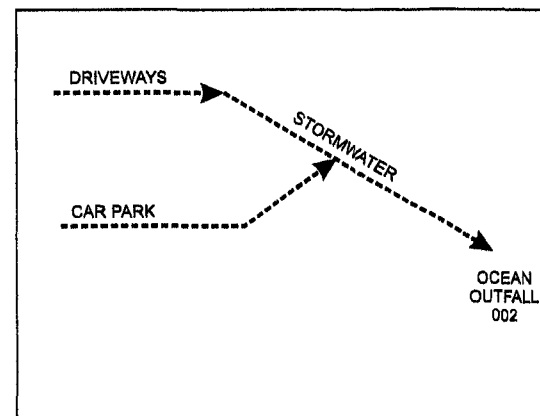
A. NAME & OFFICIAL TITLE (type or print)										B. SIGNATURE										C. DATE SIGNED									
Rose Gonzalez GENERAL MANAGER																				13/12/09									

**COMMENTS FOR OFFICIAL USE ONLY**

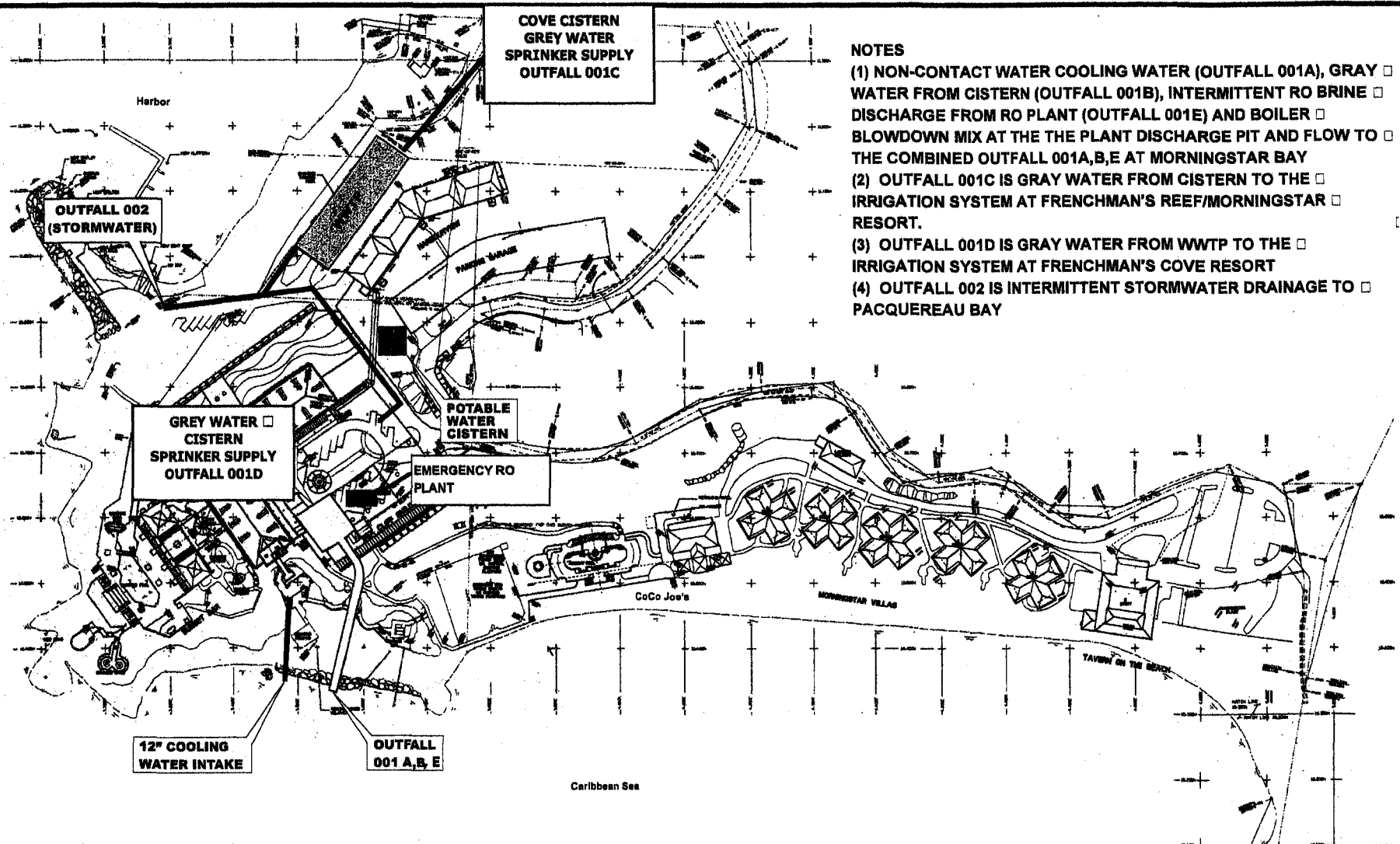
C														
C														
15	16													55



**SEE FIGURE 4 FOR DETAILS ON  
EMERGENCY RO PLANT**



**FIGURE 2**  
**Water Flow Line Diagram**  
**Frenchman's Reef Resort USVI**  
**TPDES Permit Modification Application**

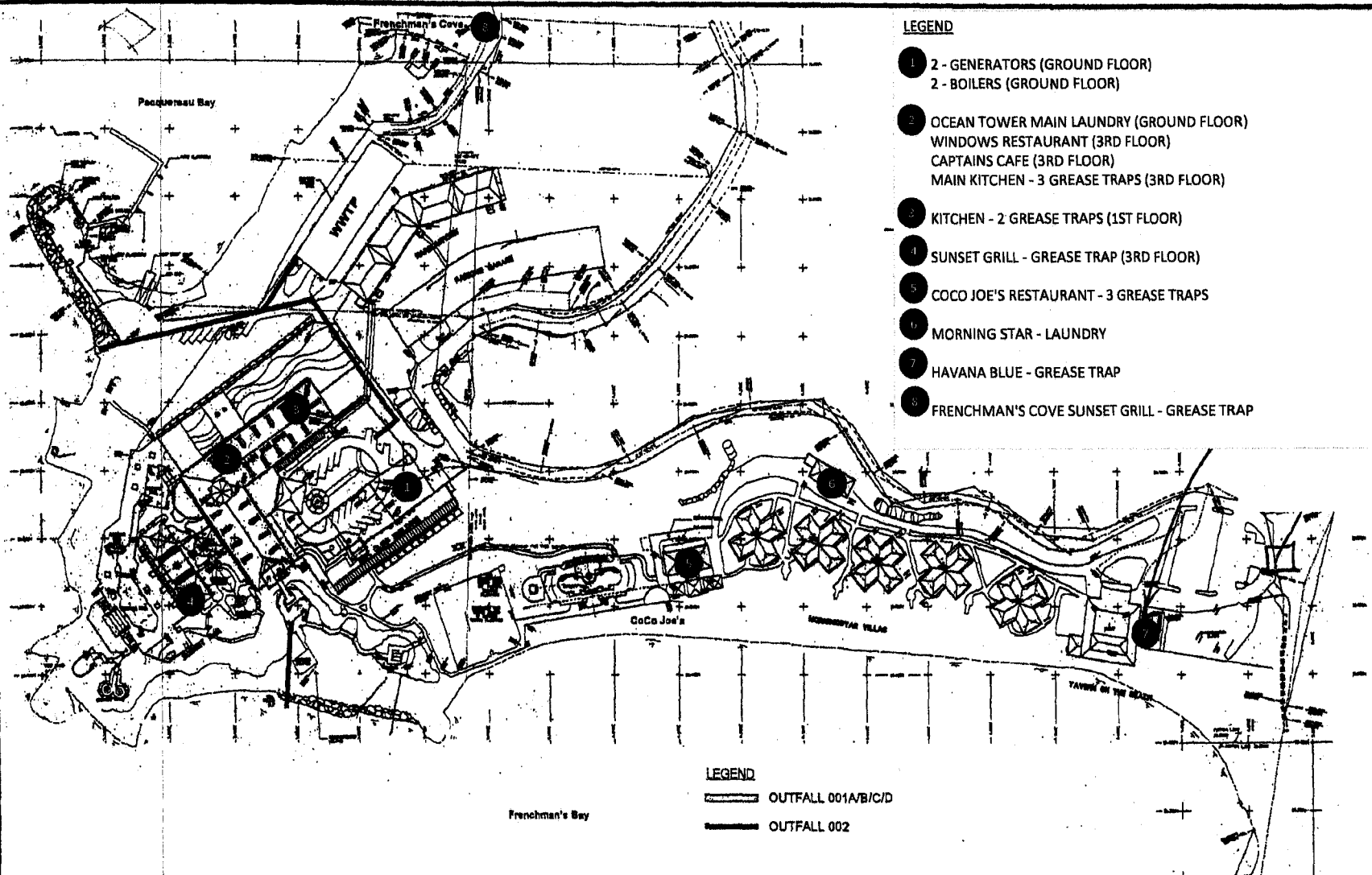


# NOTES

- (1) NON-CONTACT WATER COOLING WATER (OUTFALL 001A), GRAY WATER FROM CISTERN (OUTFALL 001B), INTERMITTENT RO BRINE DISCHARGE FROM RO PLANT (OUTFALL 001E) AND BOILER BLOWDOWN MIX AT THE THE PLANT DISCHARGE PIT AND FLOW TO THE COMBINED OUTFALL 001A,B,E AT MORNINGSTAR BAY
- (2) OUTFALL 001C IS GRAY WATER FROM CISTERN TO THE IRRIGATION SYSTEM AT FRENCHMAN'S REEF/MORNINGSTAR RESORT.
- (3) OUTFALL 001D IS GRAY WATER FROM WWTP TO THE IRRIGATION SYSTEM AT FRENCHMAN'S COVE RESORT
- (4) OUTFALL 002 IS INTERMITTENT STORMWATER DRAINAGE TO PACQUEREAU BAY



**FIGURE 1**  
**Site Plan**  
 Frenchman's Reef Resort USVI  
 TPDES Permit Modification Application



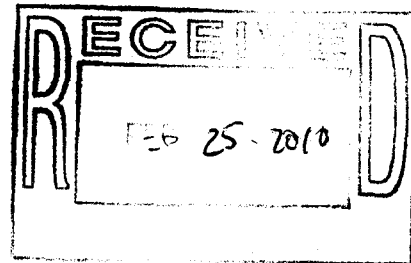
**URS**

PROJECT NO. 12004466



**FIGURE 2**  
Site Location Map  
Frenchman's Reef Resort USVI  
TPDES Permit Renewal Application

MODIFICATION



# FRENCHMANS REEF EMERGENCY RO

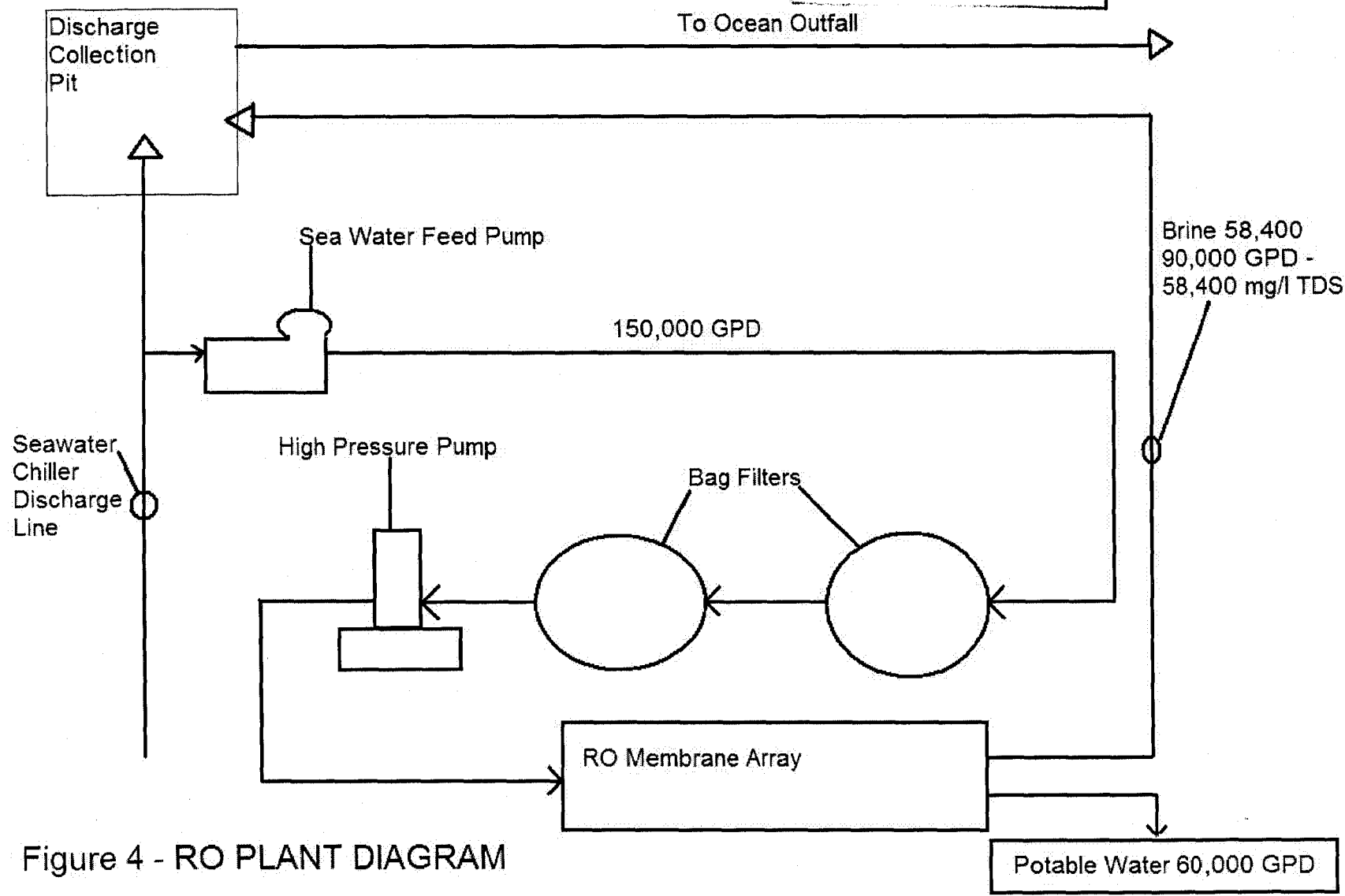
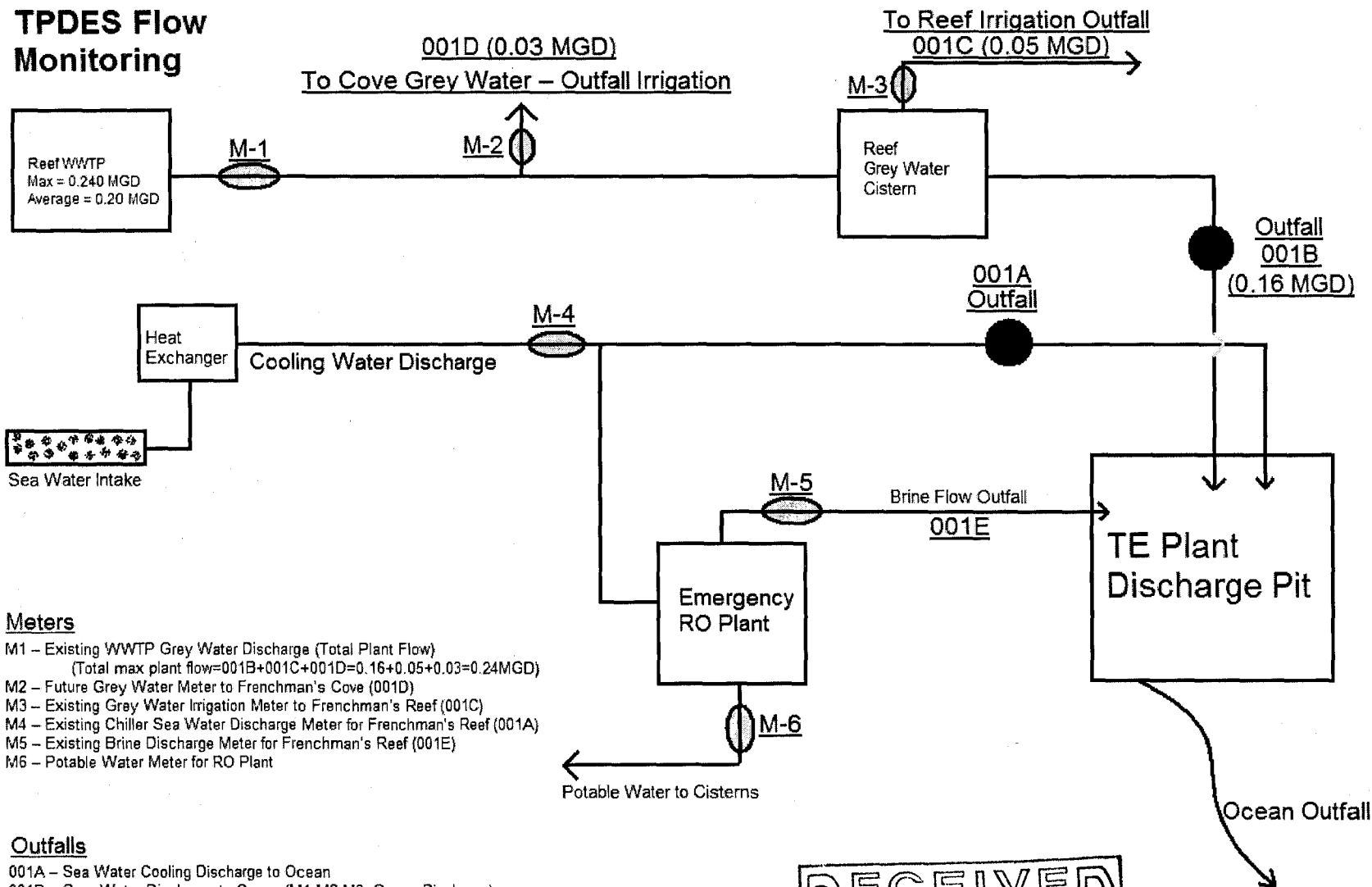


Figure 4 - RO PLANT DIAGRAM

# Frenchman's Reef TPDES Flow Monitoring

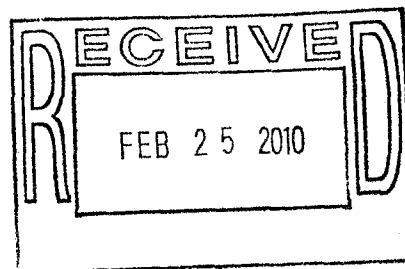


## Meters

- M1 – Existing WWTP Grey Water Discharge (Total Plant Flow)  
 (Total max plant flow=001B+001C+001D=0.16+0.05+0.03=0.24MGD)  
 M2 – Future Grey Water Meter to Frenchman's Cove (001D)  
 M3 – Existing Grey Water Irrigation Meter to Frenchman's Reef (001C)  
 M4 – Existing Chiller Sea Water Discharge Meter for Frenchman's Reef (001A)  
 M5 – Existing Brine Discharge Meter for Frenchman's Reef (001E)  
 M6 – Potable Water Meter for RO Plant

## Outfalls

- 001A – Sea Water Cooling Discharge to Ocean  
 001B – Grey Water Discharge to Ocean (M1-M2-M3=Ocean Discharge)  
 001C – Frenchman's Reef Irrigation Outfall  
 001D – Frenchman's Cove Irrigation Outfall  
 001E – RO Brine Discharge to Ocean





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U.S. Virgin Islands Operations

6501 Red Hook Plaza, Suite 201

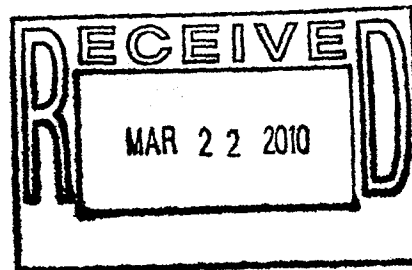
St. Thomas, Virgin Islands 00802-1306

T 340.776.7766

F 340.774.9489

March 18, 2010

Department of Planning and Natural Resources  
Mr. David Simon- TPDES Permit Administrator  
Division of Environmental Protection  
Cyril King Airport Terminal Building – Second Floor  
St Thomas, US Virgin Islands 00802



RE: TPDES Permit VI 0039829 – Permit Modification – Grease Management Plan  
Marriott Frenchman's Reef, St. Thomas

Dear Mr. Simon:

It has been noted in the past that the existing extended aeration plant struggles with grease loading as do many other resort properties. Once the plant is converted to an MBR process, it will still be essential to minimize the amount of grease entering the plant. As part of this application, all parties involved agree to work together to mitigate the grease problem through the following measures:

- Quarterly training of culinary staff in proper grease handling methods including site visit to the WWTP and tour by TSG. Selection of a culinary staff member by the resort to oversee grease handling practices in the resort kitchens. Bilingual signage is to be installed in all kitchens describing proper grease handling procedures.
- TSG to conduct monthly inspection of all grease interceptors, grease barrels and grease traps on all properties with photo documentation and recommendations for management.
- Resort management to provide preventative maintenance program for all grease interceptors, with log sheet and documentation
- Resort to provide regular hauling of all barrels and grease traps with licensed hauler documentation. Regular hauling is estimated to be on monthly intervals during high season and every two months in the off season.
- As plant operator, TSG will maintain the existing equalization basin as a low aeration/anoxic zone to act as a last collection point for any grease that may have entered the plant. As needed, the surface of this tank will be skimmed by a licensed waste hauler with loads hauled documented in the plant bound TPDES notebook.

The grease handling capacities of the resort are as follows:

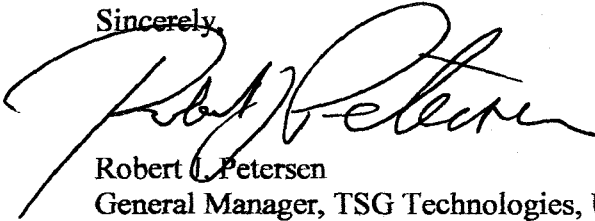
Frenchman's Cove – Sunset Grill – 750 gallon grease trap  
Havana Blue Restaurant – 10 gpm grease interceptor and 135 gallon grease trap  
Coco Joe's – 2-10 gpm grease interceptors and 420 gallon grease trap  
Sunset Kitchen – 10 gpm grease interceptor



Main Kitchen/Laundry – 2-10 gpm grease interceptors and 420 gallon grease trap

We trust that this submittal will meet with a favorable reply from DPNR and we can obtain approval from your office to obtain the building permit for the plant upgrade and the TPDES permit modification will be issued. If you have any questions or need further information, please call me at 340-776-7766.

Sincerely,



Robert L. Petersen  
General Manager, TSG Technologies, USVI

Cc: Kiera Fitzgerald, TSG  
Jose Gonzalez Espinosa – Marriott Frenchman's Reef  
David Rose – Marriott Frenchman's Reef  
Matt Dean – Marriot Frenchman's Cove  
Pieter Knott – Marriott Frenchman's Cove  
Bob Madsen – Marriott Frenchman's Cove



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February 12, 2010

Department of Planning and Natural Resources  
Mr. David Simon- TPDES Permit Administrator  
Division of Environmental Protection  
Cyril King Airport Terminal Building – Second Floor  
St Thomas, US Virgin Islands 00802

RE: TPDES Permit VI 0039829 – Request to Modify- Additional Information  
Marriott Frenchman's Reef, St. Thomas

Dear Mr. Simon:

Thank you for conducting your site visit on February 10, 2010 at Frenchman's Reef. As requested, we are providing a revised meter and outfall diagram with your suggested changes. In the past two days, we have also been able to obtain 24 hour readings on the Reef gray water Irrigation flows and the seawater cooling discharge flows as follows:

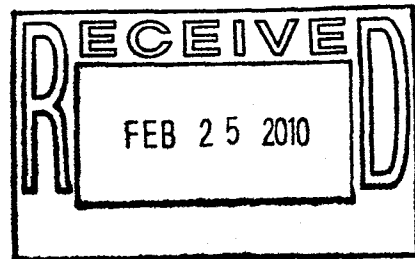
Reef Gray water Irrigation flow – 21,100 gallons per day (gpd) (Outfall 001C)  
Reef Sea Water cooling discharge flow – 884,160 gpd. (Outfall 001A)  
Outfall 001B flows will be calculated by subtracting the irrigation meter readings from the total plant meter readings to determine the amount sent to the waterfall  
Outfall 001D (Cove irrigation flow) will be metered once the meter is installed as part of the comprehensive WWTP upgrade.

We hope and trust that this submittal completes your requests for information and will meet with a favorable reply from DPNR and we can obtain approval from your office to begin the building permit process. If you have any questions or need further information, please call me at 340-776-7766.

Sincerely,

Robert J. Petersen  
General Manager, TSG Technologies, USVI

Cc:  
David Rose- Marriott Frenchman's Reef  
Jose Gonzalez Espinosa – Marriott Frenchman's Reef  
Amy Dempsey – BioImpact





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February 9, 2010

Department of Planning and Natural Resources  
Mr. David Simon- TPDES Permit Administrator  
Division of Environmental Protection  
Cyril King Airport Terminal Building – Second Floor  
St Thomas, US Virgin Islands 00802

RE: TPDES Permit VI 0039829 – Request to Modify- Additional Information  
Marriott Frenchman's Reef, St. Thomas

Dear Mr. Simon:

As per our discussions, we are submitting a revised Page V-1 and V-2 for Outfall 001B with the analytical results for the additional wastewater parameters that you requested. The hotel has also completed the installation of the three additional meters you requested in the TE plant, namely the seawater cooling flow meter, the irrigation pump discharge flow meter and the RO plant brine discharge flow meter.

We hope and trust that this submittal will meet with a favorable reply from DPNR and we can obtain approval from your office to begin the building permit process once the TPDES modification is approved. If you have any questions or need further information, please call me at 340-776-7766.

Sincerely,

Robert J. Petersen  
General Manager, TSG Technologies, USVI

Cc:

David Rose- Marriott Frenchman's Reef  
Jose Gonzalez Espinosa – Marriott Frenchman's Reef  
Amy Dempsey - BioImpact



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January 18, 2010

Department of Planning and Natural Resources  
Mr. David Simon- TPDES Permit Administrator  
Division of Environmental Protection  
Cyril King Airport Terminal Building – Second Floor  
St Thomas, US Virgin Islands 00802

RE: TPDES Permit VI 0039829 – Request to Modify- Additional Information  
Marriott Frenchman's Reef, St. Thomas

Dear Mr. Simon:

As per our meeting last week, we are submitting the missing DMR's for the Reef WWTP that cover Oct. – Dec. 2006, Jan. – Dec. 2007 and August – Dec. 2008. You should have Jan.-July of 2008 and all of 2009 in your possession already. I believe this should complete this section of the permit file.

As we discussed, we apologize on behalf of the hotel for the lapse in record keeping on the seawater cooling discharge and the irrigation pumped discharge. As you may know, the irrigation system at the Frenchman's Cove property has never accepted gray water from the plant and has used WAPA water to irrigate since opening in 2007, therefore those flows are noted as "0.0 mgd" since March 2007. The hotel plans to immediately install a new 2 inch meter on their irrigation discharge, a 6-inch meter on the seawater discharge and a brine discharge flow meter for the emergency RO plant. We will use the values from the Reef irrigation discharge and the total WWTP discharge to calculate how much gray water is being sent to the ocean outfall. Please see attached sketch of the metering locations at the Reef.

We hope and trust that this submittal will meet with a favorable reply from DPNR and we can obtain approval from your office to begin the building permit process once the TPDES modification is approved. If you have any questions or need further information, please call me at 340-776-7766.

Sincerely,

Robert J. Petersen  
General Manager, TSG Technologies, USVI

Cc:

Jose Gonzalez Espinosa – Marriott Frenchman's Reef  
Amy Dempsey - BioImpact

December 23, 2009

Department of Planning and Natural Resources  
Mr. David Simon- TPDES Permit Administrator  
Division of Environmental Protection  
Cyril King Airport Terminal Building – Second Floor  
St Thomas, US Virgin Islands 00802

RE: TPDES Permit VI 0039829 – Application to Modify- Requested Changes  
Marriott Frenchman's Reef, St. Thomas

Dear Mr. Simon:

Thank you for meeting with us on December 21, 2009 to discuss our submittal of the TPDES Permit modification application on behalf of Marriott Frenchman's Reef and Marriott Frenchman's Cove to modify and upgrade their wastewater treatment plant. It is our understanding from our discussions that since the entire upgrade will take place within the existing footprint of the wastewater treatment plant that no modification to the CZM permit will be required.

As per your request, please find attached the following additional documents to accompany the documents delivered on December 21:

- Letter confirming TSG's role as Operator and Design-Build contractor for the plant
- Revised figure 1- Site Plan
- Revised figure 2- Water Flow Line Diagram
- Revised Figure 4- RO plant
- Revised Form 2C adding Outfall 001E as the RO plant brine discharge
- Revised pages V-1 through V-9 for the outfalls: 001 A, 001 B,C,D and 001 E.
- Design Drawing D-1 showing the demolition aspects of the upgrade, namely, the removal of the sand filter, relocation of the existing stairway and removal of the concrete slab that formerly housed standby generators and the non-operational bagger.

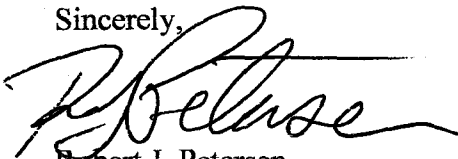
You asked about the "primary and secondary flow path" arrows on Design Drawing G-1 "Process Flow Diagram". The primary flow path indicates the path of flow through the facility once the upgrade is fully completed and operating as designed. The secondary flow path indicates the flow during an interim step of the upgrade process. For a short period of time during the upgrade, the existing sludge digester will be put into service as an aeration basin that gravity flows to the MBR tanks and returns flow from the MBR tanks to the digester via pumps. This will allow us to take the three existing aeration basins out of service to make tank penetrations, install piping and valves, clean the bottom of these tanks and make any necessary repairs to the aeration arrays. The period of time to do this is estimated at two to three weeks. Once these items are completed, the three aeration basins will be returned to service and the

sludge digester returned to its original status. The entire plant upgrade process is estimated to take 3-4 months.

You also indicated the entire permit review process could take as long as 90 days to issue the final permit modification although the department will endeavor to do so in a shorter time frame. We are eager to begin any aspects of this project that might shorten the overall time frame and with this letter, we are requesting permission to demolish the existing slab inside the WWTP that lies in the direct path of the new concrete MBR tankage. This slab is currently serving no purpose and it will save about 2 weeks in the schedule.

With this letter and attachments we trust we have addressed your requests and the permit review period can begin. If you have any questions or need further information, please call me at 340-776-7766.

Sincerely,



Robert J. Petersen  
General Manager, TSG Technologies, USVI

Cc: Kiera Fitzgerald, TSG  
Jon Sprague, TSG  
Jose Gonzalez Espinosa – Marriott Frenchman's Reef  
Matt Dean – Marriot Frenchman's Cove  
Scott McFarlane – Marriott Frenchman's Cove



MAKING EVERY DROP COUNT

www.tsgwater.com

U.S. Virgin Islands Operations

6501 Red Hook Plaza, Suite 201

St. Thomas, Virgin Islands 00802-1306

T 340.776.7766

F 340.774.9489

December 21, 2009

Department of Planning and Natural Resources  
Mr. David Simon- TPDES Permit Administrator  
Division of Environmental Protection  
Cyril King Airport Terminal Building – Second Floor  
St Thomas, US Virgin Islands 00802

RE: TPDES Permit VI 0039829 – Application to Modify  
Marriott Frenchman's Reef, St. Thomas

Dear Mr. Simon:

This is to confirm that TSG Technologies, a USVI licensed company, is the current operator of the Frenchman's Reef wastewater treatment plant. TSG has operated the plant since 2001 under several general managers and directors of engineering. In 2007, the Frenchman's Cove fractional ownership project came on line and also began to contribute flow to the plant. In addition to operating the plant, we have provided consulting advice to the resort and are currently doing the engineering to expand the plant's capacity as detailed in our TPDES Permit Modification submittal. As a design-build-operate contractor, it is our expectation that we will continue to operate the plant once we have completed the upgrades in 2010.

If you have any questions or need further information, please call me at 340-776-7766.

Sincerely,

Robert J. Petersen  
General Manager, TSG Technologies, USVI

Cc: Kiera Fitzgerald, TSG  
Jon Sprague, TSG  
Jose Gonzalez Espinosa – Marriott Frenchman's Reef  
Matt Dean – Marriot Frenchman's Cove  
Scott McFarlane – Marriott Frenchma's Cove

December 15, 2009

Department of Planning and Natural Resources  
Mr. David Simon- TPDES Permit Administrator  
Division of Environmental Protection  
Cyril King Airport Terminal Building – Second Floor  
St Thomas, US Virgin Islands 00802

RE: TPDES Permit VI 0039829  
Marriott Frenchman's Reef, St. Thomas

Dear Mr. Simon:

On behalf of Marriot Frenchman's Reef Hotel and Marriot Frenchman's Cove resort, we are submitting this application to modify the existing TPDES permit for the property. This application addresses the construction of an upgrade to the plant using membrane bioreactor technology (MBR) to increase the plant's capacity and to allow it to treat higher flows.

**History of recent activity of this permit is as follows:**

On September 7, 2006, DPNR granted TPDES permit no. VI 0039829 to BCM/CHI Frenchman's Reef, Inc. (the Permittee) to allow it to operate a seawater cooling discharge facility and a wastewater treatment plant. The plant treats wastewater from the Frenchman's Reef and Morning Star Hotel and from the Frenchman's Cove fractional ownership development. This permit is currently in effect and expires on September 30, 2011.

**Expansion of the Wastewater Treatment Plant:**

The existing plant must be expanded to provide an additional 30,000 gpd of monthly average treatment capacity due to increased flows observed in summer season of 2009 and a new Cove building opening in first quarter 2010. The attached Basis of Design Report provides the needed engineering analysis and design to support this expansion. The plant is currently permitted for 170,000 gpd monthly average flow and 200,000 gpd daily max. flow. This TPDES permit modification application is proposing a 200,000 gpd monthly average flow and a 240,000 gpd daily max flow.

**Grease Management Plan**

It has been noted in the past that the existing plant struggles with grease loading as do many resort properties. As part of this application, all parties involved agree to work together to mitigate the grease problem through the following measures:

- Quarterly training of culinary staff in proper grease handling methods including site visit to the WWTP. Selection of a culinary staff member to oversee grease handling practices



in the resort kitchens. Bilingual signage is to be installed in all kitchens describing proper grease handling procedures.

- Monthly inspection of all grease interceptors, grease barrels and grease traps on all properties with photo documentation for management.
- Preventative maintenance program for all grease interceptors
- Regular hauling of all barrels and grease traps with licensed hauler documentation. Regular hauling is estimated to be on monthly intervals during high season and every two months in the off season.

The grease handling capacities of the resort are as follows:

Frenchman's Cove – Sunset Grill – 750 gallon grease trap  
Havana Blue Restaurant – 10 gpm grease interceptor and 135 gallon grease trap  
Coco Joe's – 2-10 gpm grease interceptors and 420 gallon grease trap  
Sunset Kitchen – 10 gpm grease interceptor  
Main Kitchen – 2-10 gpm grease interceptors and 420 gallon grease trap

### **WWTP Power Outage Plan**

In the event of a power loss, the resort has two large standby generators that restore power to the resort within 5 seconds. The WWTP power feed will be directly tied to the standby generators. In the unlikely event that the standby generators do not kick in, flow to the WWTP will instantly diminish as all water pumping and lift station pumping will cease, with only the gravity line still contributing flow to the plant. At this point, the proposed mixed liquor gravity feed from the aeration basins to the MBR basins will only contribute about 6,000 to 7,000 gallons of overflow each which will be routed to the EQ tank. In the event the EQ tank capacity is exceeded, the clarifier will be off line, empty and available to accept any extra flow.

### **Emergency RO Plant**

Also included in this application is the information to permit the discharge from the existing emergency RO plant that is constructed within the total energy plant within the hotel at ground level.

We hope and trust that this submittal will meet with a favorable reply from DPNR and we can obtain approval from your office to begin the building permit process once the TPDES modification is approved. If you have any questions or need further information, please call me at 340-776-7766.

Sincerely,



Robert J. Petersen  
General Manager, TSG Technologies, USVI

Cc: Kiera Fitzgerald, TSG  
Jon Sprague, TSG  
Jose Gonzalez Espinosa – Marriott Frenchman's Reef  
Matt Dean – Marriot Frenchman's Cove  
Amy Dempsey - BioImpact

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (copy from Item 1 of Form 1)

V10039829

Form Approved.

OMB No. 2040-0086.

Approval expires 3-31-98.

FORM  
2C  
NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY  
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER  
**EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS**  
Consolidated Permits Program

**I. OUTFALL LOCATION**

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (list)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001A	18.00	19.00	30.00	64.00	55.00	37.00	Morningstar Bay
001B	18.00	19.00	30.00	64.00	55.00	37.00	Morningstar Bay
001C	18.00	19.00	31.00	64.00	55.00	37.00	Irrigation System - Frenchman's Reef
001D	18.00	19.00	31.00	64.00	55.00	38.00	Irrigation System - Frenchman's Cove
001E	18.00	19.00	30.00	64.00	55.00	37.00	Morningstar Bay

**II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES**

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (list)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT	
	a. OPERATION (list)	b. AVERAGE FLOW (include units)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1
001A	Equipment Cooling Water	2.0 MGD	Ocean Discharge through Outfall	4 B
001B	Sanitary Wastewater	0.12 MGD	Activated Sludge	3 A
			Microstraining	1 N
			Disinfection (chlorine)	2 F
			Ocean Discharge through Outfall	4 B
001C	Sanitary Wastewater	0.05 MGD	Activated Sludge	3 A
			Microstraining	1 N
			Disinfection (chlorine)	2 F
			Spray Irrigation/Land Application	4 C
001D	Sanitary Wastewater	0.03 MGD	Activated Sludge	3 A
			Microstraining	1 N
			Disinfection (chlorine)	2 F
			Spray Irrigation/Land Application	4 C
001E	Reverse Osmosis water plant	0.09 MGD	Ocean Discharge through Outfall	1 S

OFFICIAL USE ONLY (effluent guidelines sub-categories)

Please print or type in the unshaded areas only.

[illegible]

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)	OUTFALL NO. 001A
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PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

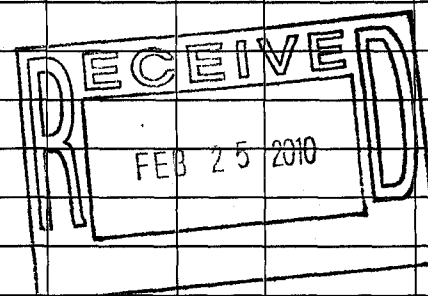
1. POLLUTANT	2. EFFLUENT							3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	N/A											
b. Chemical Oxygen Demand (COD)	N/A											
c. Total Organic Carbon (TOC)	N/A											
d. Total Suspended Solids (TSS)	N/A											
e. Ammonia (as N)	N/A											
f. Flow	VALUE 2.0		VALUE		VALUE 0.88		2		MGD	VALUE		
g. Temperature (winter)	VALUE 30		VALUE		VALUE		2		°C	VALUE		
h. Temperature (summer)	VALUE 32.3		VALUE		VALUE		2		°C	VALUE		
i. pH	MINIMUM 7.70	MAXIMUM 7.76	MINIMUM 7.56	MAXIMUM 7.67			2	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVRG. VALUE <i>(if available)</i>		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1)		(1)		(1)					(1)		
			CONCENTRATION	(2) MASS	CONCENTRATION	(2) MASS	CONCENTRATION	(2) MASS				CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (as N)		X												

RECEIVED

FEB 25 2010



PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages.  
SEE INSTRUCTIONS.

EPA I.D. NUMBER (copy from Item 1 of Form 1)  
VI0039829

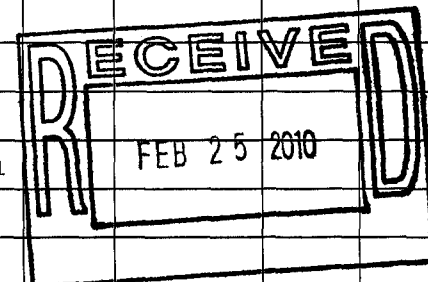
V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)	OUTFALL NO. 001B, C, D
--	---------------------------

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

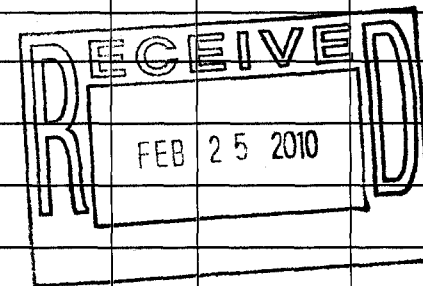
1. POLLUTANT	2. EFFLUENT							3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	22						2	mg/l				
b. Chemical Oxygen Demand (COD)	82						2	mg/l				
c. Total Organic Carbon (TOC)	14						2	mg/l				
d. Total Suspended Solids (TSS)	28.7						3	mg/l				
e. Ammonia (as N)	23.5						2	mg/l				
f. Flow	VALUE 0.24		VALUE 0.20		VALUE 0.18		30		MGD	VALUE		
g. Temperature (winter)	VALUE 30		VALUE		VALUE		5	°C		VALUE		
h. Temperature (summer)	VALUE 33		VALUE		VALUE		5	°C		VALUE		
i. pH	MINIMUM 5.5	MAXIMUM 8.2	MINIMUM 6.1	MAXIMUM 8.2			5	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual	X		1.0						3	mg/l				
c. Color		X												
d. Fecal Coliform	X		22						3	#/100ml				
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (as N)	X		4.5						1	mg/l				



1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X		28.1						2	mg/l				
h. Oil and Grease	X		6.9						2	mg/l				
i. Phosphorus (as P), Total (7723-14-0)	X		5.9						2	mg/l				
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)		X												
l. Sulfide (as S)		X												
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)		X												
p. Barium, Total (7440-39-3)		X												
q. Boron, Total (7440-42-8)		X												
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)		X												
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)		X												
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												



V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO.

001E

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	N/A											
b. Chemical Oxygen Demand (COD)	N/A											
c. Total Organic Carbon (TOC)	N/A											
d. Total Suspended Solids (TSS)	N/A											
e. Ammonia (as N)	0											
f. Flow	VALUE	.09	VALUE		VALUE		Estimat		MGD	VALUE		
g. Temperature (winter)	VALUE	28	VALUE		VALUE		Estimat		°C	VALUE		
h. Temperature (summer)	VALUE	32.2	VALUE		VALUE		Estimat		°C	VALUE		
i. pH	MINIMUM	7.0	MAXIMUM	8.0	MINIMUM	MAXIMUM			STANDARD UNITS			

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (as N)		X			1									